

### **Remarks**

Claims 1, 23, 42-45 are pending in the application. Claims 1 and 42 were amended. New claim 45 was added. Claims 2-22 were canceled without prejudice.

Support for the claim amendments can be found throughout the application. Therefore, no new matter has been added. Importantly, the claim amendments should not be construed to be an acquiescence to any of the claim rejections. Rather, the amendments to the claims are being made solely to expedite the prosecution of the above-identified application. The Applicants expressly reserve the right to further prosecute the same or similar claims in subsequent patent applications claiming the benefit of priority to the instant application. 35 USC § 120.

### **Election/Restriction**

The Applicants respectfully affirm the provisional election of the species wherein variable X is O, Y is O, and Z is O. In light of the fact the Examiner advanced rejections based on the search of the elected species, claims 1 and 42 have been amended such that X is O, Y is O, and Z is O. Claims 2-22 have been canceled because they were redundant in light of the amendments made to claims 1.

Of course, the Applicants expressly retain the right to pursue claims to the subject matter removed by the amendments to conform the claims with the species elected. 35 USC § 120. Moreover, the Applicants respectfully assert on the record that no art has been introduced by the Examiner that relates to the patentability of the subject matter removed to conform the claims with the election of species.

### **Claim Rejections Based on 35 USC § 102(b)**

Claims 1-4, 6, 8, 10, 12, 14, 16-19, 21 and 23 were rejected under 35 USC § 102(b), based on the Examiner's contention that they are anticipated by Sabesan (U.S. Patent 5,095,123) or Hashimoto et. al. (*J. Chem. Soc. Chem. Comm.* **1989**, 685-687).

The Applicants respectfully point out that all of the glycosyl phosphate compounds disclosed in the Sabesan and Hashimoto references are diphenyl phosphates. In order to expedite prosecution, the Applicants have amended claim 1 to remove "aryl" from the definition of "R." Consequently, the Sabesan and Hashimoto references, wherein only diphenyl phosphates are

disclosed, do not anticipate amended claim 1 because the definition of “R” does not include aryl, of which set phenyl is a member phenyl.

Further, claim 1 was amended to accommodate the change in the definition of “R” by substitution of “R<sub>6</sub>” for “R” in the definition of R<sub>2</sub>, R<sub>3</sub>, R<sub>4</sub>, and R<sub>5</sub>. In other words, because the teachings of the references relied upon by the Examiner do not relate to compounds within the existing scope at those positions, i.e., R<sub>2</sub>, R<sub>3</sub>, R<sub>4</sub>, and R<sub>5</sub>, the Applicants have made amendments to the labeling system used in the claims to limit the decrease in claim to that necessitated by the art relied upon by the Examiner. Hence, the amendment does not change the original scope of the R<sub>2</sub>, R<sub>3</sub>, R<sub>4</sub>, and R<sub>5</sub> substituents.

Finally, also in light of the amendment to claim 1, new claim 45 has been introduced wherein R is aryl. The scope of R<sub>3</sub>, R<sub>4</sub>, and R<sub>5</sub> in this claim is limited such that claim 45 is not anticipated by Sabesan and Hashimoto references.

Accordingly, the Applicants respectfully request the withdrawal of the rejection of claim 1 under 35 USC § 102(b).

**Claim Rejections Based on the Judicially-Created Doctrine  
of Obviousness-Type Double Patenting**

Claims 42-44 stand provisionally rejected under the judicially-created doctrine of obviousness-type double patenting as being unpatentable over claims 17-19 of U.S. Patent No. 6,323,339 (“the ‘339 patent”).

The Applicants respectfully request that the Examiner hold in abeyance all obviousness-type double patenting rejections based on the ‘339 patent until allowable subject matter is indicated, at which point the Applicants will file a terminal disclaimer if necessary.

**Fees**

The Applicants believe no fee is due in connection with the filing of this paper. Nevertheless, the Director is hereby authorized to charge any required fee to our Deposit Account, **06-1448**.

**Conclusion**

In view of the above amendments and remarks, it is believed that the pending claims are in condition for allowance. The Applicants respectfully request reconsideration and withdrawal of the pending rejections. The Applicants thank the Examiner for careful consideration of the present case. If a telephone conversation with Applicants' Attorney would expedite prosecution of the above-identified application, the Examiner is urged to contact the undersigned.

Respectfully submitted,  
FOLEY HOAG LLP



Dana M. Gordon, Ph.D.  
Registration No. 44,719  
Attorney for Applicants

Patent Group  
FOLEY HOAG LLP  
155 Seaport Boulevard  
Boston, MA 02210

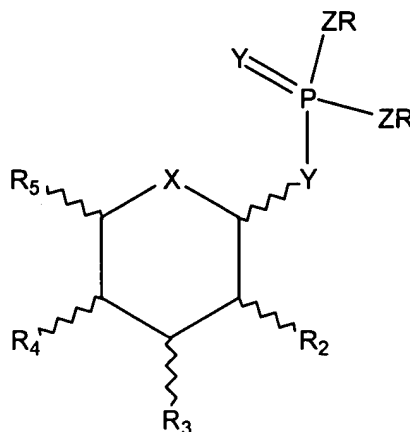
(617) 832-1000  
(617) 832-7000 (FAX)

Date: \_\_\_\_\_

6/6/03

*Marked-up Version of Amended Claims Showing Changes Made*

1. **(amended)** A compound represented by [generalized] structure 1:



1

wherein

X represents O[, NR', or S];

Y represents independently for each occurrence O[, NR', or S];

Z represents independently for each occurrence O[, NR', or S];

R is selected, independently for each occurrence, from the group consisting of H, alkyl, heteroalkyl, [aryl,] aralkyl, heteroaryl, and heteroaralkyl;

R' is selected, independently for each occurrence, from the group consisting of H, alkyl, heteroalkyl, aryl, aralkyl, heteroaryl, heteroaralkyl, acyl, and sulfonyl;

R<sub>2</sub>, R<sub>3</sub>, and R<sub>4</sub> are independently selected from the group consisting of R<sub>6</sub>[R], -OR', -SR', -NR'<sub>2</sub>, -OSO<sub>3</sub>H, and -OPO<sub>3</sub>H<sub>2</sub>;

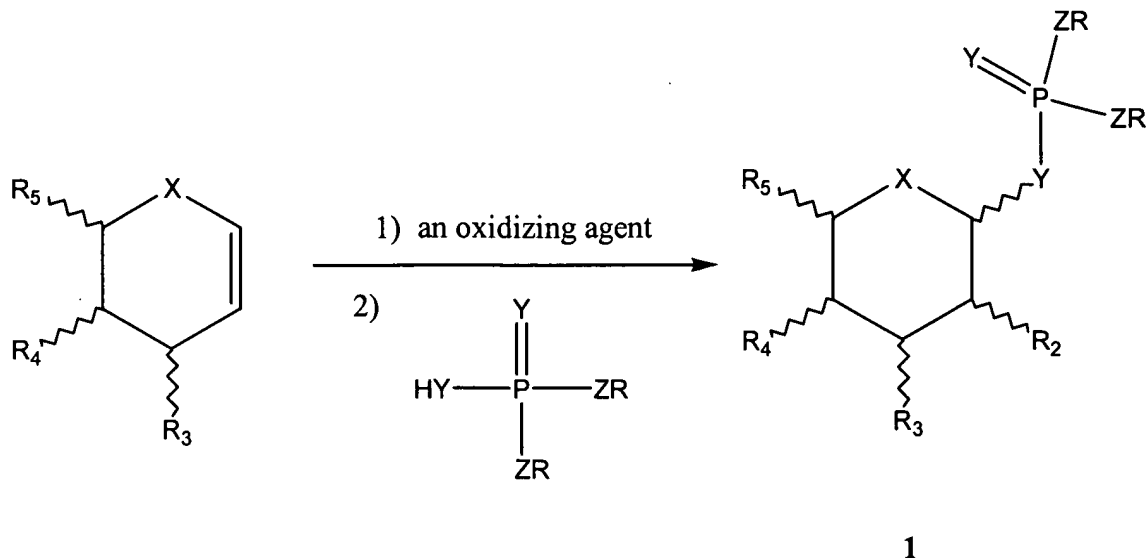
R<sub>5</sub> is selected from the group consisting of R<sub>6</sub>[R], -(CR<sub>2</sub>)<sub>n</sub>OR', -(CR<sub>2</sub>)<sub>n</sub>SR', and -(CR<sub>2</sub>)<sub>n</sub>NR'<sub>2</sub>;

R<sub>6</sub> is selected, independently for each occurrence, from the group consisting of H, alkyl, heteroalkyl, aryl, aralkyl, heteroaryl, and heteroaralkyl;

and

n is an integer selected from the range 0 to 10 inclusive.

42. (**amended**) A method of synthesizing a compound represented by **1**, wherein said method is represented by the following scheme:



wherein

X represents O[, NR', or S];

Y represents independently for each occurrence O[, NR', or S];

Z represents independently for each occurrence O[, NR', or S];

the oxidizing agent is selected from the group consisting of dioxiranes, percarboxylates, and persulfates;

R is selected, independently for each occurrence, from the group consisting of H, alkyl, heteroalkyl, aryl, aralkyl, heteroaryl, and heteroaralkyl;

R' is selected, independently for each occurrence, from the group consisting of H, alkyl, heteroalkyl, aryl, aralkyl, heteroaryl, heteroaralkyl, acyl, and sulfonyl;

$R_2$  is OR';

$R_3$ , and  $R_4$  are independently selected from the group consisting of R, -OR', -SR', -NR'<sub>2</sub>, -OSO<sub>3</sub>H, and -OPO<sub>3</sub>H<sub>2</sub>;

$R_5$  is selected from the group consisting of R,  $-(CR_2)_nOR'$ ,  $-(CR_2)_nSR'$ , and  $-(CR_2)_nNR'_2$ ;  
and

$n$  is an integer selected from the range 0 to 10 inclusive.